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# THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

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VOLUME XXI

MARCH 1913

NUMBER 3

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## THE JUNIOR COLLEGE, OR UPWARD EXTENSION OF THE HIGH SCHOOL

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Fresno, California

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Geographic-educational conditions in California are such as to demand that the public-school system, in many sections of the state, shall meet the requirements for advanced training above the four-year high-school course.

If the map of California were placed on the eastern seaboard of the United States it would cover the whole of New Hampshire, Vermont, Massachusetts, Rhode Island, New Jersey, Delaware, Maryland, and about two-thirds of New York, Pennsylvania, Virginia, and North Carolina. While the population of California is less than that of each of several of the above-mentioned states, on the other hand, two or three small areas in this state each contain a greater population than that of each of four of the smaller states mentioned. Besides the two great universities in California—the state university and Stanford University—both of which are located near San Francisco, the state is without university advantages such as are afforded by a large number of colleges and universities distributed over like areas in the eastern portion of this country. Thus when one considers only the largest of the eastern universities and thinks of their geographical distribution from Harvard at the north to Johns Hopkins at the south, the concentration of university opportunities in California becomes obvious. The element of distance is a most important factor to

the individual in planning his educational career. Even though the financial consideration of railroad fare be overcome, a parent will often hesitate to send his child so far from home that one, or possibly two, visits a year only are possible. Parents are justly concerned as to the advisability of severing home ties and the home restraints that should often continue for some years after the age of graduation from the high school as this latter institution is commonly organized in the United States. Some towns in California are almost as far, on an air-line, from either of the universities as Chicago is from New York, and many are much farther by the nearest railroad.

The above-mentioned conditions had much to do with the passage of a law by the legislative session of 1907 giving high schools the authority to extend the scope of their work to include two years of college training. The text of the law is as follows:

The high-school board of any high-school district, or trustees of any county high school, may prescribe postgraduate courses of study for the graduates of such high school, or other high schools, which course of study shall approximate the studies prescribed in the first two years of university courses. The high-school board of any high-school district, or trustees of any high school wherein such postgraduate courses of study are taught, may charge tuition for pupils living without the boundaries of the district or county wherein such courses are taught.

It will be noted that the law does not make provision for financing this advanced work, leaving it to local communities to provide the necessary funds. It seems that the framers of the law intended to put this higher educational work on the same basis as the regular high-school course, so far as state aid and local financing are concerned. At the next session of the legislature succeeding the passage of this law, a bill was passed providing substantial state aid for such schools as desired to take advantage of this movement; but owing to the unusual draft on the state exchequer the governor vetoed the measure. It seems quite probable that such a measure will be presented again at the coming session, with a more favorable outlook toward meeting the financial obligations involved.

It is well known that California is most liberal in providing financial support for its educational institutions. It may there-

fore be assumed that it was not the lack of financial support that caused a delay of three years from the time the legislature passed the above-mentioned act before the first steps were taken by any school department to put it into effect.

As previously stated, the population of California is found to be grouped in several important centers. These in order of population are: the Bay section with San Francisco as its nucleus, southern California with Los Angeles as its center, Sacramento Valley with Sacramento as its center, San Joaquin Valley with Fresno as its center, extreme southern California with San Diego as its center, then several smaller groups along the coast and in the northern part of the state. Each of these local centers has its own problems and conditions in the way of government, climate, industries, commerce, and education.

The Bay section is well provided with institutions for higher educational training as before stated. Southern California has several colleges and universities of secondary rank which are equipped to meet local demands. The center of population in the Sacramento Valley section is less than one hundred miles from the state university. The San Joaquin Valley section, however, the center of which is over two hundred miles from any institution of higher education, seemed to be the most logical division in which the "junior college" should have its birth.

The first movement toward making use of this "upward extension" law was made by the city superintendent of the Fresno schools in June, 1910, when a circular letter was sent to patrons of the Fresno High School and to the principals of various other nearby high schools. Over two hundred favorable replies were received with not one adverse opinion. A report was then presented to the local board of education presenting conditions and arguments looking toward the establishment of an institution of higher learning in connection with the local high school. The substance of this report will, no doubt, best present the leading facts pertaining to the organization and establishment of this first "junior college."

There is no institution of higher education within two hundred miles of Fresno where students may continue their studies beyond the regular high-school courses. Many of our high-school graduates are but seventeen or eighteen years of age and parents are frequently loath to send these young

people so far from home. Many who desire to continue their studies cannot afford the expense necessary to college attendance where the items of room and board mean so much. Authorities in the University of California and Stanford University have been consulted in this matter and seem much interested in the project. Both have promised such assistance as they may be able to render in planning courses and securing instructors. There seems to be no question as to the possibility of doing work of such merit as will command recognition from these institutions. The following general aims are set forth:

1. To give to young people of this section of the state, who cannot afford to go to either of the universities, an opportunity to continue their studies at home.
2. To provide practical courses in agriculture, manual training, domestic science, and other technical work in addition to the regular academic courses.
3. To carry students through the first two years of a college course, thus enabling them to complete a four years' course with but two years' residence at the university.

The report concluded with the following recommendations:

1. That the Board of Education authorize the establishment of a two years' postgraduate course along the lines above mentioned.
2. That mathematics, English, Latin, modern languages, history, economics, and technical work be the general courses offered for the first year.
3. That a competent person be secured as dean or head of this department, with such assistants as the attendance and courses desired may justify.

This report was adopted and the superintendent was authorized to carry out the details preparatory to opening this department along with the high school in September following.

Several vacancies occurring at this time in the high school, including the principalship, it was thought best to reorganize, placing the new principal over the entire institution including the "junior college," and selecting for the heads of such departments as were vacant instructors with college experience and thorough university training. This plan was carried out, it being understood that these special instructors should take such regular high-school classes as might be required to fill in their daily programs. Three such teachers were selected, one of whom was given the title "Dean of the Junior College." The state university authorities rendered valuable assistance in selecting the head of the school as well as these assistants.

Special equipment was purchased for scientific and mathe-

matical instruction and quite a number of books added to the library, the entire cost not exceeding \$1,500. The extra expense for salaries for the first year was \$3,200, counting actual time devoted to junior college classes. The enrolment for the first year was twenty, which number has been doubled in this the third year. The cost for maintenance now runs about \$4,200 per annum, making the expense per capita for this work run a little in excess of \$100 per annum—somewhat larger than that of regular high-school instruction. About one-third of the attendance in this department is from other high schools in this section of the state. A tuition of \$4 per month is charged these non-resident students—the same as charged for the regular high school.

In September, 1911, the Fresno State Normal School was established and temporarily housed in the high-school building, and conducted in conjunction with the junior college. No doubt many students were enrolled in the normal at this time who would otherwise have taken regular junior college work. On the other hand, scores of normal students have elected college subjects where their courses permitted electives outside their regular professional studies.

It cannot be said that the junior college has attracted to it all or even a comparatively large part of the students in this section of the state who are pursuing college courses. It would have been quite impossible for a new institution, without adequate funds or equipment, to care for the hundreds who take up higher educational work. Nor was it to be expected or even desired that such a result would follow. In many instances it is desirable that a student have a new environment—a new setting, so to speak—to give new zest and an added stimulus to his efforts. Even though a local institution offers equal advantages, it is often advisable to throw the young high-school graduate on his own responsibility for a time by severing home relationships. It is not, therefore, the aim of this institution to take over the entire responsibility of doing the first two years of college work. While authorities in both of the California universities seem to look forward to the time when they will be entirely relieved of this first two years of college work,

it will require substantial aid from the state, and years of effort and experimentation, with earnest co-operation on the part of the universities, to bring about such a result. At the very outset many conditions and problems arise, and success or failure depends on the outcome of their solution. First, there is the natural prejudice which arises in the minds of the teachers in the regular high-school faculty, who have so long constituted the *corps d'élite* of the school department, against adding to the school a department of higher educational standing. It might seem an easy solution of the question merely to add two successive years of work to the regular high-school courses, using teachers already in the school so far as they are qualified to do the higher work. This plan has been followed in one or more of the cities of the state with the result that students look upon it as mere advanced high-school work instead of distinctive college work. Then if it is the purpose of the school to meet the standards of the universities, and gain their support and confidence, it is necessary to put special instructors in charge who shall at once command the attention and confidence of both the student and the university. As before stated, conditions in Fresno were quite favorable in meeting this problem. A separate faculty, with one of the number chosen as dean, was selected; it being the purpose to have a separate student body, and in every possible way endeavor to impress upon students and the public at large the fact that serious work of distinctive college standards is being undertaken.

The opinions of some leading educators will show the interest that this movement has developed in California.

I am looking forward, as you know, to the time when the large high schools of the state in conjunction with the small colleges will relieve the two great universities from the expense and from the necessity of giving instruction of the first two university years. The instruction of these two years is of necessity elementary and of the same general nature as the work of the high school itself. It is not desirable for a university to have more than about two thousand students gathered together in one place, and when the number comes to exceed that figure then some division is desirable. The only reasonable division is that which will take away students who do not need libraries or laboratories for their work. The value of the university is highly dependent

on its possession of great and expensive libraries. I am interested in the experiment which is going on at Fresno, and in the high school in Los Angeles.

Very truly yours,

DAVID STARR JORDAN  
*President Leland Stanford Junior University*

May 16, 1912

Farsighted and progressive educators are agreed that the establishment of "junior colleges" denotes a necessary development in the right direction. Such extensions of the four-year high school would (1) enable the universities to concentrate their efforts on university work proper, (2) provide for young people from eighteen to twenty years of age the immense educational advantage of being taught and trained in small groups, not far from home, (3) make it possible for thousands who are unable to attend a university to round out their general education, (4) reduce very materially the cost of college and university education, (5) provide—a most important factor—finishing vocational courses in agriculture, the industries, commerce, applied civics, domestic science, etc., which cannot be adequately provided either by the four-year high school or by the universities, (6) tend to create a number of educational centers of a high order whose influence for good would extend in many directions over large areas of the state.

The state university has stood for the junior college plan for more than fifteen years, and its policy is to further the establishment of junior colleges in every possible way. This implies of course that the university stands ready to recognize the courses of junior colleges as the equivalent of corresponding courses at Berkeley and to give full credit for successfully completed work.

The city of Fresno is to be greatly congratulated on being the first city in the state to establish a junior college. May this prosper and become year by year more useful, especially to those who would otherwise have to forego the chance of higher vocational training. Those recommended for university work at Berkeley will, I feel confident, have no reason to regret that their Freshman and Sophomore work was done in Fresno.

ALEXIS F. LANGE  
*Dean of the Faculties, University of California*

May 30, 1912

Excerpts from a circular prepared by F. Liddeke, principal of the Fresno Junior College and High School:

Professor Alexis F. Lange, dean of the University of California and head of its educational department, during his recent visit of inspection addressed the Seniors and college students. He traced the development of the movement for the upward extension of high schools in California. This movement aims to relegate the work of college Freshman and Sophomore years in uni-

versities to the high schools sufficiently equipped to carry such work, and so to have American universities gradually approximate to the continental European universities. It is becoming more and more necessary to eliminate secondary studies in our highest institutions of learning, and to put them in high schools where they belong.

It was furthermore stated that because of having to mass lower division students at the University of California in very large classes, it is impossible to give them anything like the opportunities they need. The instructors and the equipment are overtaxed. It was asserted expressly that Fresno students had a better chance and could do better college Freshman and Sophomore work in their "junior college" than at the university. Here at home, in their small classes they could get closer to, and keep closer to, their studies and their instructors.

One point was emphasized clearly; namely, that the University of California would recognize, and could afford to recognize, the college work done by Fresno students in their home institution, that if the principal approved of the college work done by any student in Fresno High School, that work would be accepted by the university, and it would count in every respect the same as if the work had been done at the University of California and without the necessity of any further examinations.

Dr. Lange also dwelt on the opportunity upward extension in the high school affords to students who will never go to a university, and never intend to go, and how desirable it is for this college work to adapt itself to the needs of the community. He said it is cause for just pride and congratulation for Fresno High School to be a pioneer, by a whole year, in this important movement. Santa Barbara has followed this year, and Los Angeles. Others will follow next year.

Dr. Lange also stated that the Fresno six-year high-school course is also preparatory to the affiliated colleges at San Francisco, Hastings College of Law, and the California College of Medicine and Dentistry. Commencing with next year these colleges will require for entrance two more years of preparatory studies in addition to graduation from an accredited high school. Students promoted from Fresno Junior College will be admitted to any of these affiliated colleges on equal terms with students who have completed the Sophomore year at the University of California, and without any examinations or conditions.

At the University of California the courses are divided into "lower division" and "upper division." The lower division includes the Freshman and Sophomore years, and the completion of the lower division work entitles the student to the "junior certificate." Only then, when he has qualified for this certificate, is the student enabled to become a member of the university proper, for the real university commences with the Junior year and extends through the graduate courses. Hence, the first two college years are essentially pre-

paratory, for the work of these years is only a continuation of preparatory education. By commencing to relegate all this secondary work to the secondary schools, the university aims to lessen the swamping of its premises with blessings in the way of Freshmen and Sophomores it is not equipped to care for. The present equipment is only sufficient for upper divisions, real university work. In view of the rapidly increasing population of this state this policy becomes all the more imperative.

Stanford University is also backing this upward extension movement. In fact, the term "junior college" is said to have originated with President Jordan. Professor Bentley, Stanford inspector, during his visit last semester expressed great interest and solicitude in having lower college work done in high schools. Our two great California universities are one in their attitude toward "junior college" work in our secondary institutions.

In addition to the advantages already indicated, the fact should commend itself to parents particularly that they are enabled to have their children at home, and under home influences for two years longer, to say nothing of economy in expenses. This applies more especially to students living in or near Fresno, but also in the case of students from more remote homes who are enabled to be at home during the week end.

The following details with regard to the faculty and the courses offered may be of interest for the purpose of showing the equipment of the school. The academic training of each teacher is indicated as perhaps the most important item in describing each department.

#### JUNIOR COLLEGE FACULTY

F. Liddeke, principal.

A.B., Harvard University; Berlin University.

G. W. Huntting, dean of College Department. College English and Latin.

A.B., Columbia University; M.L., University of California.

J. A. Nowell, vice-principal of high school. College history.

A.B., Stanford University.

H. W. Stager. College mathematics.

A.M., Stanford University; Ph.D., University of California.

J. A. Daly. College physics.

B.S., University of California.

B. A. Stagner. College chemistry.

Kirkville State Normal; A.B. and B.S., University of Missouri.

Miss Katherine M. Douglas. College French.

A.B., University of California; University of Paris.

Miss Florence Robinson. College German.

A.B., University of California.

Courses offered	Years in course
English, 2 years.....	5 and 6
Latin, 2 years.....	5 and 6
German, 2 years.....	4 and 5
French, 2 years.....	4 and 5
European history.....	5
Industrial history, alternate years.....	5
Institutional history.....	6
Solid geometry	
Trigonometry, $\frac{1}{2}$ year.....	5
Analytical geometry, $\frac{1}{2}$ year.....	5
Algebraic theory, $\frac{1}{2}$ year.....	5
Descriptive geometry, $\frac{1}{2}$ year.....	5 and 6
Calculus, differential	
Calculus, integral, 1 year.....	6
Organic chemistry, 1 year.....	5 and 6
Chemical analysis, qualitative and quantitative, 1 year.....	5 and 6
Advanced physics, 1 or 2 years.....	5 and 6
Surveying, 1 year.....	5 and 6
Machine shop, 1 year.....	5 and 6

Many other high schools in the state have taken up this advanced work, but probably none under so definite and distinctive an organization as that under which the Fresno movement is carried on. Several, however, are now laying the foundation for the full two years' college work with a more or less distinctive organization. From the many inquiries received from leading educators of other states it is evident that this movement is also attracting some attention elsewhere.